

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: James T. Aslanis, et al.

Docket No: TI-27730A.1A

Serial No: Not Assigned

Conf. No: Not Assigned

Examiner: TBD

Art Unit: TBD

Filed: 02/11/02

For: FRAME SYNCHRONIZATION IN MULTICARRIER TRANSMISSION SYSTEMS

Assistant Commissioner for Patents

Washington, DC 20231

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I hereby certify that the above correspondence is being  
deposited with the U.S. Postal Service with sufficient  
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service under 37 CFR 1.10 and is addressed to: Assistant  
Commissioner for Patents, Washington, DC 20231 on  
2-11-02.

  
Ann Trent

**PRELIMINARY AMENDMENT**

Dear Sir:

Prior to the examination of the above identified application, Applicants respectfully  
submit the following amendments and remarks.

## **IN THE SPECIFICATION**

On page 1, insert the following new paragraph beginning on line 6 under Related Applications:

This application is a continuation of co-pending prior U.S. application Serial No. 09/193,014, filed November 16, 1998, which is a divisional application of prior U.S. application Serial No. 08/770,702, filed December 19, 1996 (now U.S. patent 5,901,180), which is a continuation application of prior U.S. application Serial No. 08/275,409 (now U.S. patent 5,627,863), the disclosures of which are incorporated herein by reference.

On page 1, replace the second paragraph beginning on line 8 under Related Applications with the following rewritten paragraph:

United States patent 5,479,447 in the name of P. S. Chow et al. and entitled "Method And Apparatus For Adaptive, Variable Bandwidth, High-Speed Data Transmission Of A Multicarrier Signal Over Digital Subscriber Lines," which describes details of a multicarrier system using DMT modulation.

## **IN THE CLAIMS**

Please cancel Claims 1-17 without prejudice or disclaimer.

Please add new Claim 18 as follows:

18. (New) A receiver, comprising:

- a Fast Fourier Transform for transforming time domain values into complex amplitudes in the frequency domain;
- a buffer for supplying received time domain values to the demodulation unit according to a frame boundary;
- a correlator for correlating complex amplitudes of a synchronizing frame with a synchronizing pattern stored at the receiver to produce a correlation result;
- a derotation multiplier coupled to the correlator; and
- a frame synchronizer in response to the correlation result being below a predetermined value, adjusting the frame boundary by a time shift determined by performing a plurality of correlations between the stored synchronizing pattern and the complex amplitudes multiplied in each case multiplied by a respective complex value representing a respective complex derotation of the complex amplitudes corresponding to a respective time shift of the synchronizing frame.

## REMARKS

Claim 18 remains in the application for consideration by the Examiner.

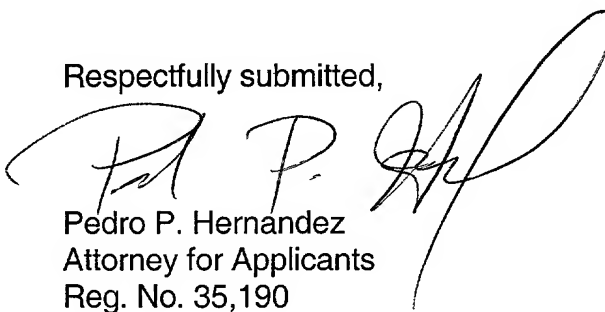
An early and favorable action is respectfully requested.

Should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner contact the undersigned in order to expeditiously resolve any outstanding issues.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with Markings to Show Changes Made.**"

To the extent necessary, Applicants petition for an Extension of Time under 37 CFR 1.136. Please charge any fees in connection with the filing of this paper, including extension of time fees, to the deposit account of Texas Instruments Incorporated, Account No. 20-0668.

Respectfully submitted,



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